Listing of Claims:

1. (PREVIOUSLY PRESENTED) An array comprising a plurality of individual microchannels for capturing an individual cell therein, wherein each individual microchannel includes an entry portion for receiving said cell and an exit portion that said cell may pass through, wherein the plurality of microchannels are arranged in rows and columns and wherein there are at least two rows and at least two columns, wherein the exit portion of each individual microchannel faces the entry portion of the microchannel in a successive row.

2. (CANCELED)

3. (CANCELED)

4. (PREVIOUSLY PRESENTED) The array of claim 1, wherein said microchannels are wedge-shaped, wherein the wedge shaped microchannels have a three dimensional entry portion that is wider than a three dimensional exit portion.

5. (CURRENTLY AMENDED) The array of claim 3, wherein said length is about 60 ~~between 50 and 70~~ microns, said entry width is about 3.7 ~~between 3.5 and 4.0~~ microns, and said exit width is about 1.5 microns and depth of about 3.4 ~~between 3.2 and 3.6~~ microns.

6. (CURRENTLY AMENDED) The array of claim 3, wherein said length is about 35 ~~between 30 and 37~~ microns, said entry width is about 3.6 ~~between 3.4 and 3.8~~ microns, and said exit width is about 1.4 ~~between 3.4 and 3.8~~ microns.

7. (CURRENTLY AMENDED) The array of claim 3, wherein said length is about 100 ~~between 95 and 105~~ microns, said entry width is about 4.5 ~~between 4.3 and 4.7~~ microns, and said exit width is about 1.5 ~~between 1.3 and 1.7~~ microns.

8. (CURRENTLY AMENDED) The array of claim 3, wherein said length is about 16 ~~between 14 and 18~~ microns, said entry width is about 3.6 ~~between 3.4 and 3.8~~ microns, and said exit width is about 1.4 ~~between 1.2 and 1.6~~ microns.

9. – 11. (CANCELED)

12. (PREVIOUSLY PRESENTED) The array of claim 1, further comprising shunt channels, wherein said shunt channels comprise individual microchannels arranged in at least one row and at least two columns, wherein said microchannels are adapted to allow said cell to enter the entry portion and exit the exit portion in order to bypass an individual microchannel occupied with a cell.

13. (PREVIOUSLY PRESENTED) The array of claim 12, wherein said shunt channels have a length of between 10 microns and 100 microns.

14. (ORIGINAL) The array of claim 1, wherein said microchannels have cross-sectional dimensions adapted to temporarily deform a cell passing therethrough.

15. (ORIGINAL) The array of claim 1, further comprising a means for moving said cells through said microchannels.

16. (ORIGINAL) The array of claim 15, wherein said means for moving said cells through said microchannels comprises a vacuum pump for pulling said cell through said microchannels, negative pressure generated by connected water columns, or a peristaltic pump for driving said cell through the channels.

17. (CANCELED)

18. - 46. (CANCELED)

47. (PREVIOUSLY PRESENTED) A gradient array for analyzing a plurality of cells comprising at least three rows of microchannels and at least two columns of microchannels, wherein the microchannels have an entry portion for receiving cells and an exit portion whereby cells may pass through, wherein the exit portion of the microchannels in the first row face the entry portion of the microchannels in a second row and the exit portion of the microchannels in the second row face the entry portion of the microchannel in a third row, and wherein the width of the microchannels in the first row is wider than the cells to be analyzed such that cells enter the entry portion and exit the exit portion of the microchannels in the first row and enter the entry portion of the microchannels in the second row, and wherein the microchannels in the first row have a first width which is larger compared to the width of the microchannels in the second row, wherein cells are either trapped within a microchannel in the second row or pass through the exit portion of the microchannel in the second row and enter the entry portion of the microchannel in the third row, wherein cells that pass through the exit portion of the second row enter the entry portion of the microchannels in the third row.

48. (CURRENTLY AMENDED) The array of claim ~~1~~ 4, wherein the dimensions of the wedge-shaped microchannel are defined by area and volume, wherein the area and volume of a cell are known and the length, width and height of the microchannel is varied so that a target blood cell may enter, but not exit.

49. (PREVIOUSLY PRESENTED) An array comprising a plurality of individual microchannels for capturing an individual cell therein, wherein each individual microchannel includes an entry portion for receiving said cell and an exit portion that said cell may pass through, wherein the plurality of microchannels are arranged in rows and columns and wherein there are at least two rows and at least two columns, wherein the exit portion of each individual microchannel faces the

entry portion of the microchannel in a successive row, wherein each individual microchannel is a wedge shape, wherein the wedge shaped microchannels have a three dimensional entry portion that is wider than a three dimensional exit portion.

50. – 53. (CANCELED)